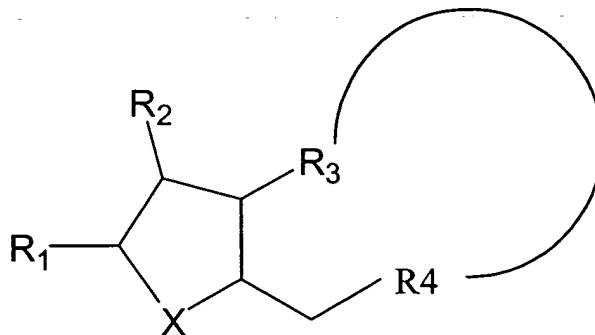


We claim:

1. Furanose-type macrocyclic carbohydrate compounds having the formula



wherein R_1 is selected from the group consisting of alkyl, aryl, O-aryl, S-aryl, OH, O-alkyl, SH, S-alkyl, NH_2 , N_3 , halogens, $-OOCH$, and $COOH$;

wherein R_2 is selected from the group consisting of H, hydroxyl, aliphatic and aromatic ethers and esters;

wherein R_3 is selected from the group consisting of alkyl, aryl, O-aryl, S-aryl, OH, O-alkyl, SH, S-alkyl, NH_2 , N_3 , halogens, $-OOCH$, $COOH$, and acetal rings;

wherein R_4 is selected from the group consisting of alkyl, aryl, O-aryl, S-aryl, OH, O-alkyl, SH, S-alkyl, NH_2 , N_3 , halogens, $-OOCH$, $COOH$, and acetal rings; and

wherein X is selected from the group consisting of O, N and S.

2. A compound as defined in claim 1, wherein R_1 is preferably phenyl; R_2 is preferably selected from the group consisting of $-OMe$, $-OH$, and $-H$; R_3 is preferably selected from the group consisting of $-OH$, $-OAc$, $-OH$, $-OBn$, and $-H$; and R_4 is preferably selected from the group consisting of $-H$, $-OAc$, and $-OBn$; or a pharmaceutically active derivative thereof.

3. A compound as defined in claim 1, wherein R_1 and R_2 form a ring and are $-OC(CH_3)_2O-$.

4. A compound as defined in claim 1, wherein R₃ and R₄ form a ring and are preferably selected from the group consisting of -OSi(*i*-Pr)₂OSi(*i*-Pr)₂O- and -OCH(Ph)O-.

5. A method of treating a viral infection in a mammalian subject comprising the step of
5 administering to the subject a composition comprising at least one compound of claim 1.

6. The method of claim 5 wherein the composition contains a compound of claim 1 in an effective anti-viral amount.

10 7. The method of claim 5 wherein the mammalian subject is a human patient or another mammal.

8. A method as defined in claim 3, wherein the viral infection is an infection caused by Cytomegalovirus.

15